**SRIPM Advantages**

**EFFICIENCY**
The Reluctance Rotor is a low loss design for current to take a natural path of least resistance. There are no windings in the rotor - this means 0 ohmic rotor losses. Cooling fans are not required, yielding even lower losses.

**PRECISION**
The constant and revolving fields rotate at synchronous speeds, allowing for precise control with no rotor slip.

**TORQUE**
The Internal Permanent Magnets produce significant torque over non-magnetic SR motors.

**INTEGRATION**
The integrated motor and controller/inverted are designed for and mapped to one other for maximum performance and efficiency.

Introducing the **HyPer 9HV Integrated System™ (IS)**. The ideal power-train for any light to mid-weight daily driver. Combine multiple systems for heavy-weight and racing vehicles. The Synchronous Reluctance Internal Permanent Magnet (SRIPM) platform delivers outstanding torque and efficiency, generating higher power per pound than any other motor in its class. The **HyPer 9HV IS™** includes the Brushless, 144V **HyPer 9HV™ Motor**, **HyPer-Drive X144™ Controller/Inverter**, Low Voltage Wire Harness, and Main Contactor!

- **Type**: **SRIPM**
- **Voltage**: 144V Nominal
- **Current**: 500 Amp
- **Efficiency Peak**: 95%
- **kW Peak**: 90 @ 170V
- **kW Continuous**: 38 @ 3,600RPM
- **RPM Peak**: 8,000
- **Torque**: 162 lbs.-ft. @ 0 RPM
- **Regen**: Yes, Tailorable
- **Motor Diameter**: 8.66”
- **Motor Length**: 13.976”
- **Motor Weight**: 130 lbs.
- **Controller Weight**: 9 lbs.
- **Shaft**: Single Ended, Keyed
- **Mounting**: B-Face (**WarP 9™**)
- **Insulation**: Class “H”
- **Software**: SmartView
- **Delivery**: Stock
Our motors are the preferred choice for electric vehicle conversions. We offer the greatest value for your money, as well as:

- Unparalleled support
- Unparalleled performance
- Unparalleled durability

Motor Selection
There are many factors that will determine which motor is the best match for your electric vehicle project. Some key areas to consider are:

- Voltage available
- Current available
- Vehicle weight
- Vehicle coefficient of drag
- Vehicle frontal area
- Vehicle speed to be maintained on level ground
- Vehicle speed to be maintained on a grade
- Percent of the grade
- Final gear ratio
- Tire diameter
- Mounting options

When considering the option of direct drive for an application, the “rule of thumb” is that it will require twice the motor, and twice the controller of a comparable vehicle with a transmission.

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